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09/398,378	09/17/1999	LEONARD CORNING LAHEY	BO9-99-030	1012

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EXAMINER
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MEINECKE DIAZ, SUSANNA M

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/398,378

Applicant(s)

LAHEY ET AL.

Examiner

Susanna M. Diaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

1. This Non-Final Office action is responsive to Applicant's amendment filed October 14, 2003.

Claims 1, 13, and 25 have been amended.

Claims 1-36 are pending.

2. All previously pending rejections are withdrawn. Furthermore, in light of new prior art found in an updated search, the previous indication of allowable subject matter is withdrawn as well.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1, 3, 4, 6-8, 11-13, 15, 17, and 18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. Furthermore, mere intended or nominal use of a component, albeit within the technological arts, does not confer statutory subject matter to an otherwise abstract idea if the component does not apply, involve, use, or advance the underlying process.

In the present case, all of the core steps of claims 1, 3, 4, 6-8, 11-13, 15, 17, and 18 could be performed by hand. For example, in a broad, yet reasonable interpretation of the claim language, a "signal" could be a hand signal or vocal response (i.e., not necessarily an electrical signal) and a "database" could be any collection of data. Based on the specification, the Examiner understands that the entire process is likely completely automated by a computer. However, such a clarification should be explicitly reflected in the claim language. For example, at least one of the core steps (e.g., identifying a work process, processing a job, modifying the status of the job) should be expressly performed by some element of technology, such as a computer processor.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Randell (U.S. Patent No. 5,826,020).

Randell discloses a method for processing a job, comprising:

[Claim 1] generating a signal when status for the job changed from a first status to a second status, wherein each status for the job is associated with a single work process for processing the job among multiple work processes, wherein each status refers to a next process to be performed on the job by the single work process associated with the status, and wherein each work process is an application program (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

identifying a work process for processing the job based on the second status (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

notifying the work process associated with the second status that one job had its status changed to the second status in response to the signal (Figs. 3, 4, 10A, 12, 13;

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col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

processing, with the work process, the job that had its status changed from the first status to the second status (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55); and

modifying, with the work process, the status of the job after completing the processing of the job (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

[Claim 2] wherein the signal is transmitted to a routing process and indicates the second status (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55), further comprising:

processing with the routing process a mapping associating each status with one work process in response to receiving the signal (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55); and

determining from the mapping one work process associated with the second status, wherein the determined work process is notified of the job (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

[Claim 3] wherein job status is maintained in a database table including information on the job, further comprising maintaining, with the work process, a connection with the database that enables communication with the database table, wherein modifying the status of the job after completing processing comprises updating the status of the job to an output status associated with another work process, and wherein updating the status with the output status generates the signal indicating a change in status (col. 6, lines 51-67);

[Claim 4] wherein the signal is generated by an event trigger in the database that responds to an update to the status of the job in the database table (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

[Claim 5] wherein there are multiple work processes each associated with one input status and at least one output status, wherein each work process is enabled to update the job status with one associated output status after completing the processing of the job, wherein the output status for one work process is the input status associated with one other work process, and wherein the definition of input and output statuses for work processes, defines the workflow of the job (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

[Claim 6] determining whether the work process completed processing the job successfully (Fig. 12; col. 12, lines 1-44; col. 13, line 40 through col. 14, line 17); and

updating the status of the job to an error status if the work process did not complete processing the job successfully, wherein the status of the job is updated with one output status associated with the work process if the job work process completed processing the job successfully (Fig. 12; col. 6, lines 51-67; col. 12, lines 1-44; col. 13, line 40 through col. 14, line 17);

[Claim 8] querying the database table for jobs having the status associated with the work process (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

processing the jobs having the status associated with the work process (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

terminating processing of the database table if there are no further jobs in the database table having the status associated with the work process (col. 4, lines 4-27; col. 5, lines 6-13, 39-43; col. 6, lines 51-67 -- Various activities that define a procedure need to be accomplished in order to complete the procedure; therefore, once all related activities are finished, it is understood that the processing of the procedure is complete as well); and

querying the database table for additional jobs after receiving the notification (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);



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[Claim 9] wherein the work process spawns a work thread to process one job in the database table having the status associated with the work process, wherein the work process is capable of spawning multiple work threads to process different jobs having the status associated with the work process (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

[Claim 10] wherein the job comprises a data file, wherein at least one work process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the work process to an output device (col. 6, lines 24-35 -- The format of data must be altered in one way or another in order to be processed and sent over, i.e., output over, a communications network, such as a LAN);

[Claim 11] wherein at least two work processes process the job at different devices in communication over a network, further comprising accessing the job from another device over the network to process the job at the device on which the work process executes (Figs. 3, 4; col. 4, lines 4-27; col. 15, lines 2-12);

[Claim 12] adding a status update to a list providing status updates for each job (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55); and

using the list to determine how the job has been processed by the work processes (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55).

Randell discloses a method for processing a job, comprising:

[Claim 7] generating a signal when status for the job changed from a first status to a second status, wherein the job may be processed by one or more work processes (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

notifying a work process associated with the second status that one job had its status changed to the second status in-response to the signal (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

processing, with the work process, the job that had its status changed from the first status to the second status (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55); and

modifying, with the work process, the status of the job after completing the processing of the job (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

wherein job status is maintained in a database table including information on the job and maintaining, with the work process, a connection with the database that enables communication with the database table, wherein modifying the status of the job after completing processing comprises updating the status of the job to an output status associated with another work process, and wherein updating the status with the output

status generates the signal indicating a change in status (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 16, lines 27-55);

wherein the work process further comprises performing:

determining whether the work process completed processing the job successfully (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 13, line 40 through col. 14, line 17; col. 16, lines 27-55); and

updating the status of the job to an error status if the work process did not complete processing the job successfully, wherein the status of the job is updated with one output status associated with the work process if the job work process completed processing the job successfully (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 13, line 40 through col. 14, line 17; col. 16, lines 27-55); and

wherein an error work process is associated with the error status, wherein updating the job to the error status causes the notification of the error work process (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 13, line 40 through col. 14, line 17; col. 16, lines 27-55), and wherein the error work process further comprises performing:

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performing error recovery operations on the job (Figs. 3, 4, 10A, 12, 13; col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 13, line 40 through col. 14, line 17; col. 16, lines 27-55);

determining whether the error recovery operations corrected the job (Figs. 3, 4, 10A, 12, 13, col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 13, line 40 through col. 14, line 17; col. 16, lines 27-55); and

setting the job status of the corrected job to a first possible status in the workflow (Figs. 3, 4, 10A, 12, 13, col. 4, lines 4-13; col. 5, lines 28-48; col. 6, lines 51-67; col. 8, lines 11-39; col. 9, lines 4-16, 53-60; col. 12, lines 1-44; col. 13, line 40 through col. 14, line 17; col. 16, lines 27-55).

[Claims 13-24] Claims 13-24 recite limitations already addressed by the rejection of claims 1-12 above; therefore, the same rejection applies. Furthermore, it should be noted that Randell's invention is implemented by a computer system (Fig. 1).

[Claims 25-36] Claims 25-36 recite limitations already addressed by the rejection of claims 1-12 above; therefore, the same rejection applies. Furthermore, it should be noted that Randell's invention is implemented by a computer system (Fig. 1).

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Fizman et al. (U.S. Patent No. 6,115,646) -- Discloses an object-oriented workflow management system

Akifuji et al. (EP 0982675 A2) -- Discloses a workflow system with a status watcher database function.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (703) 305-1337. The examiner can normally be reached on Monday-Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703)308-1113.

Any response to this action should be mailed to:

**Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450**

or faxed to:

**(703)305-7687** [Official communications; including  
After Final communications labeled  
"Box AF"]

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**(703)746-7048**

[Informal/Draft communications, labeled  
"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 22202, 7<sup>th</sup> floor receptionist.



Susanna M. Diaz

Primary Examiner

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November 26, 2003